

CLAIMS

What is claimed is:

1. A media registration mechanism for aligning print media in an image forming device, the mechanism comprising:
 - a registration wall;
 - a plurality of media carriers configured parallel to each other and parallel to the registration wall, each of the plurality of media carriers being positioned a different distance from the registration wall and configured to move print media in a direction along the registration wall; and
 - each of the plurality of media carriers being configured to move the print media at a speed based on a position of a media carrier relative to the registration wall to cause the print media to rotate towards and align against the registration wall.
2. The media registration mechanism of claim 1 wherein the plurality of media carriers include a plurality of belts.
3. The media registration mechanism of claim 1 wherein a media carrier positioned closer to the registration wall is configured to move the print media at a slower speed than another media carrier positioned farther away from the registration wall.
4. The media registration mechanism of claim 1 wherein the plurality of media carriers includes at least a first belt and a second belt, the first belt being positioned between the second belt and the registration wall.
5. The media registration mechanism of claim 1 further comprising a drive means coupled to the plurality of media carriers for driving the plurality of media carriers at different speeds.
6. The media registration mechanism of claim 5 wherein the drive means comprises a motor coupled to a drive shaft including a first pulley having a first diameter and a second pulley having a second diameter that is greater than the first diameter wherein the first belt is in driving engagement with the first pulley and the second belt is in driving engagement with the second pulley.

7. The media registration mechanism of claim 6 further comprising:
 - a first idler shaft and a second idler shaft wherein the drive shaft is positioned between the first idler shaft and the second idler shaft,
 - the first and second idler shafts each include a first bearing and a second bearing wherein the first belt is in driving engagement with each of the first bearings of the first and second idler shafts and the second belt is in driving engagement with each of the second bearings of the first and second idler shafts.
8. The media registration mechanism of claim 7 wherein the first diameter of the first pulley is between about 1% and about 5% less than the second diameter of the second pulley such that the second speed of the second belt is between about 1% and about 5% less than the first speed of the first belt.
9. The media registration mechanism of claim 1 further comprising a plurality of motors each coupled to a media carrier for driving each media carrier at different speeds.
10. A media steering mechanism for positioning a sheet of media prior to imaging, the mechanism comprising:
 - a fence;
 - a plurality of media carriers, each of the media carriers configured to move the sheet of media in a direction substantially parallel to the fence, each of the media carriers being offset a different distance from the fence in one direction; and
 - a drive mechanism for driving each of the media carriers at a speed less than an adjacent media carrier that is positioned a greater distance away from the fence such that the sheet of media is steered towards the fence to cause an edge of the sheet of media to contact the fence.
11. The media steering mechanism of claim 10 wherein the drive mechanism comprises a motor and a drive shaft coupled to the motor, the drive shaft including different diameter portions configured to drive the plurality of media carriers at different speeds.

12. An image forming device comprising:
 - a media registration mechanism including:
 - a wall,
 - a first media carrier oriented substantially parallel to and spaced a first distance apart from the wall,
 - at least a second media carrier oriented substantially parallel to and spaced a second distance apart from the wall,
 - the first and second media carriers being configured to steer a sheet of media towards the wall when the first and second media carriers are driven at different speeds; and
 - an image forming mechanism configured to form an image onto the sheet of media once received from the media registration mechanism.
13. The image forming device of claim 12 wherein the media registration mechanism further comprises a drive mechanism coupled to the first and second media carriers for driving the first media carrier at a first speed and the second media carrier at a second speed greater than the first speed of the first media carrier.
14. The image forming device of claim 13 wherein the drive mechanism comprises a motor coupled to a drive shaft, the drive shaft including a first diameter portion and a second diameter portion that is larger than the first diameter portion wherein the first media carrier is in driving engagement with the first diameter portion and the second media carrier is in driving engagement with the second diameter portion.
15. The image forming device of claim 12 wherein the media registration mechanism further comprises a first motor coupled to the first media carrier for driving the first media carrier at a first speed and a second motor coupled to the second media carrier for driving the second media carrier at a second speed greater than the first speed of the first media carrier.
16. The image forming device of claim 12 wherein the image forming mechanism includes a liquid electrophotographic mechanism.

17. A method of aligning print media against a registration wall in an image forming device, the method comprising the steps of:
 - moving the print media along a media path substantially parallel to the registration wall;
 - simultaneously moving different portions of the print media at different speeds where a portion closer to the registration wall is moved at a slower speed to cause the print media to rotate towards the registration wall until an edge of the print media is substantially aligned against the registration wall.
18. The method of claim 17 further including the step of advancing the print media to an image forming mechanism once the print media has been aligned.
19. An image forming device having a media registration mechanism for aligning print media along a registration wall, the mechanism comprising:
 - a first media carrier configured to move print media in a direction substantially parallel to the registration wall;
 - a second media carrier, positioned adjacent to the first media carrier, configured to move the print media in the direction substantially parallel to the registration wall; and
 - the first and second media carriers configured to cause the print media to move towards the registration wall upon concurrently engaging the print media, until a side of the print media contacts and aligns along the registration wall.
20. The image forming device of claim 19 wherein the first media carrier is configured to move the print media at a first speed and the second media carrier is configured to move the print media at a second speed different from the first speed.
21. The image forming device of claim 20 wherein the first media carrier is positioned between the second media carrier and the registration wall and wherein the first speed is less than the second speed.
22. The image forming device of claim 19 wherein the first media carrier, the second media carrier and the registration wall are substantially parallel to each other.

23. The image forming device of claim 19 wherein the first media carrier is positioned between the second media carrier and the registration wall and being configured to cause a drag in the movement of the print media relative to the second media carrier.
24. The image forming device of claim 19 wherein the first and second media carriers include at least one belt for moving the print media in a linear direction.
25. The image forming device of claim 19 further including a drive means for moving the first media carrier at a first speed and for moving the second media carrier at a second speed different than the first speed.
26. The image forming device of claim 19 further including at least a third media carrier adjacent to the first and second media carriers.
27. A method of moving print media along a media path in an image forming device including an alignment wall positioned along a portion of the media path and being substantially parallel to the media path, the method comprising the steps of:
 - moving a first portion of the print media along the media path at a first speed;
 - and
 - simultaneously moving a second portion of the print media along the media path at a second speed different from the first speed causing a side edge of the print media to align against the alignment wall.
28. The method of claim 27 further including simultaneously moving at least a third portion of the print media along the media path at a third speed different from the first and second speeds.
29. The method of claim 27 wherein the print media is rotated towards the alignment wall while moving along the media path.